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FIG. 1

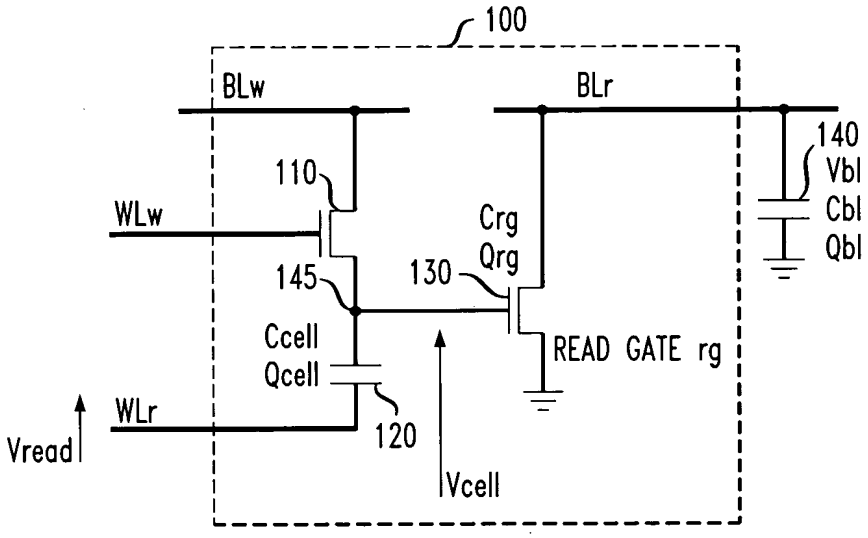

FIG. 2

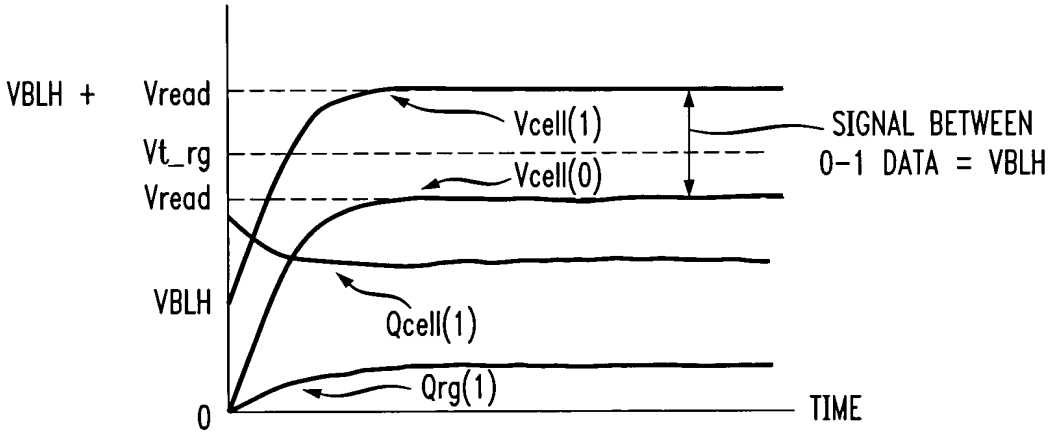

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FIG. 3A

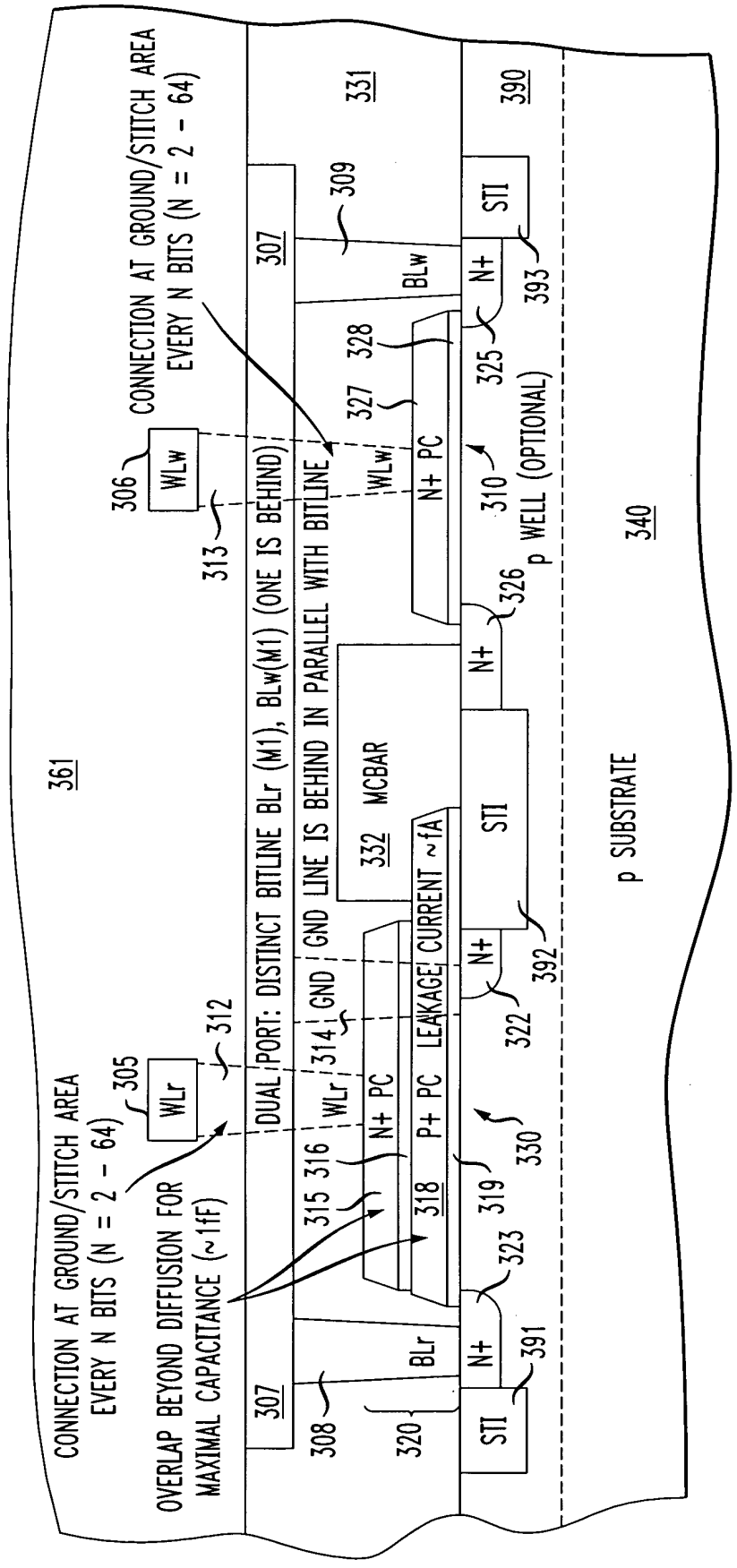

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FIG. 3B

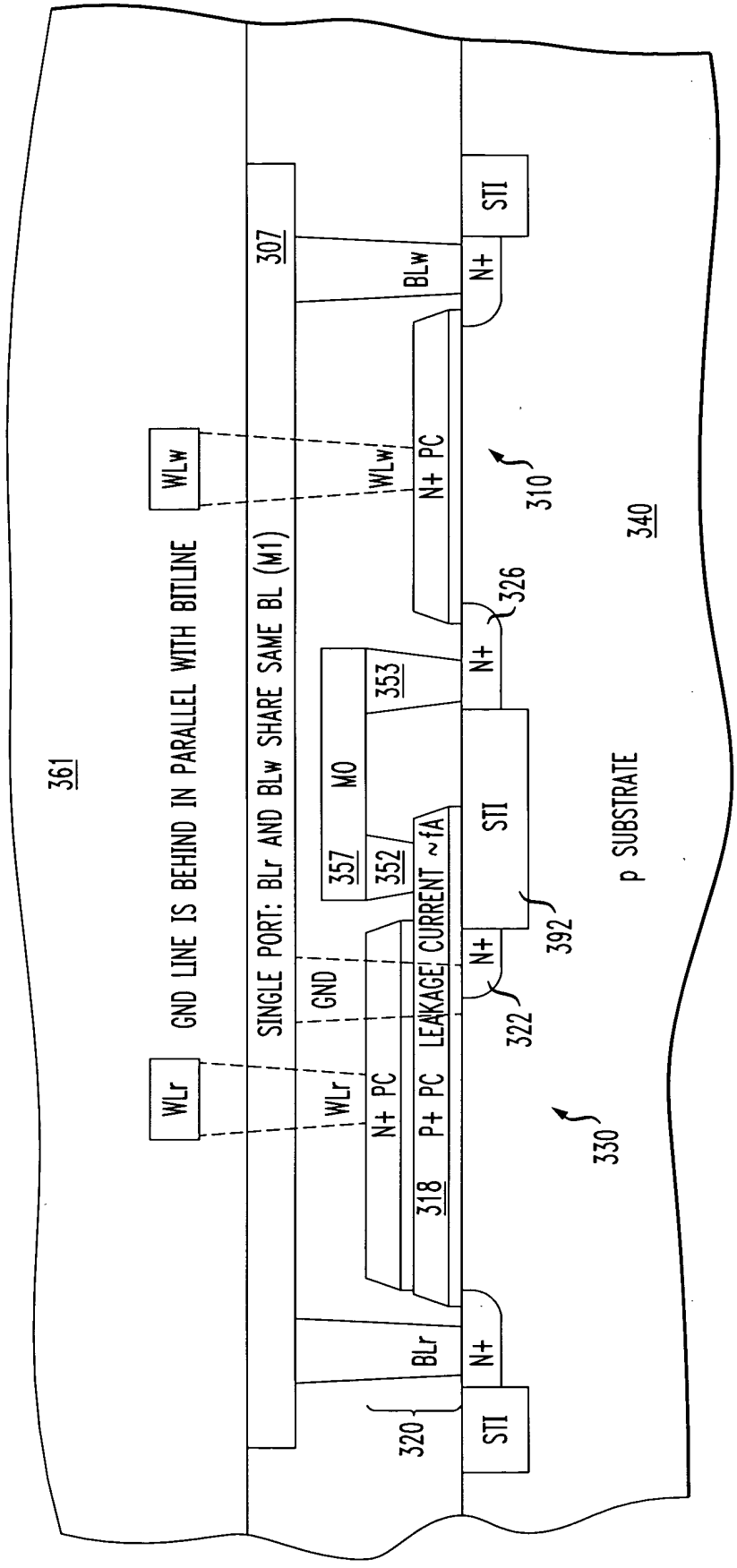

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FIG. 4A

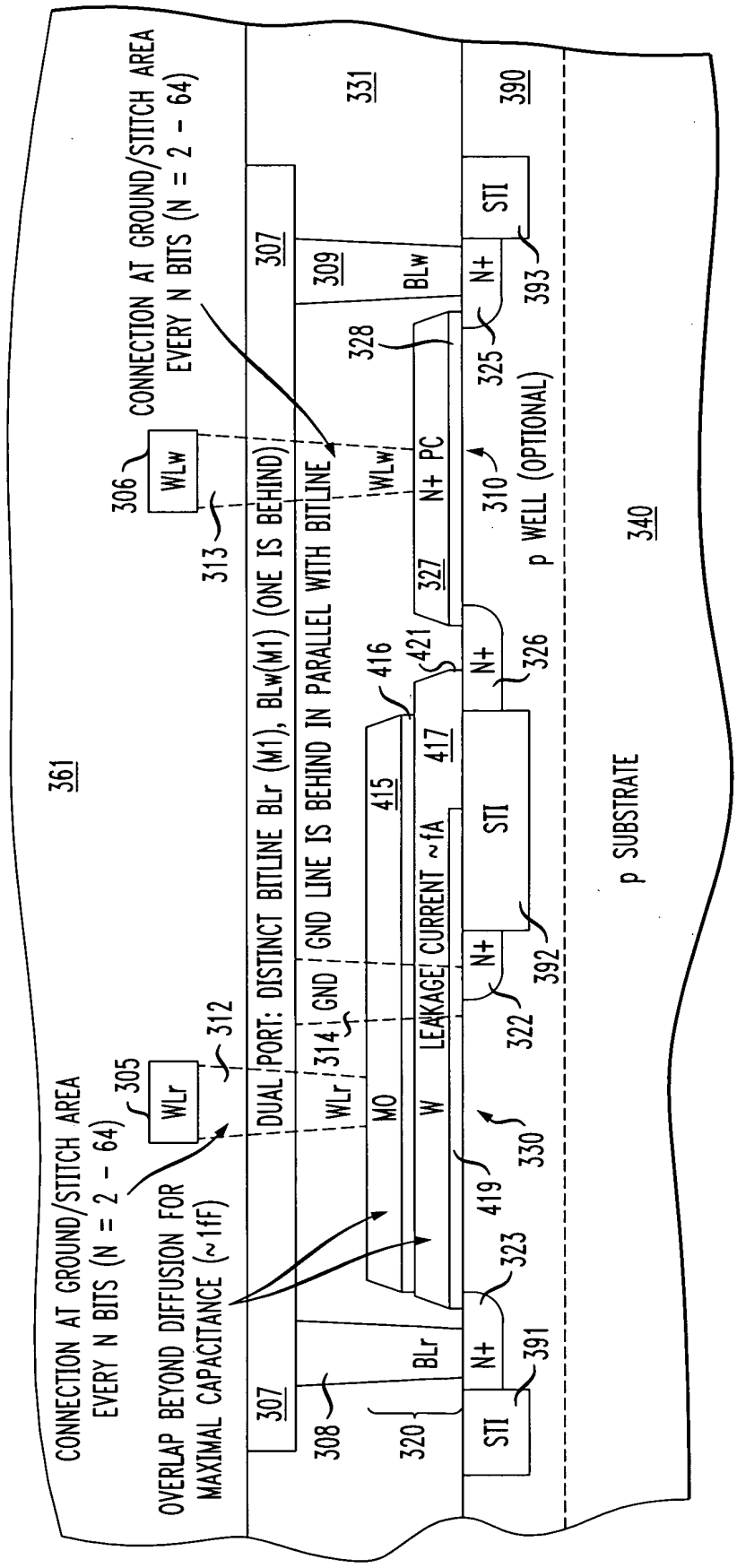

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FIG. 4B

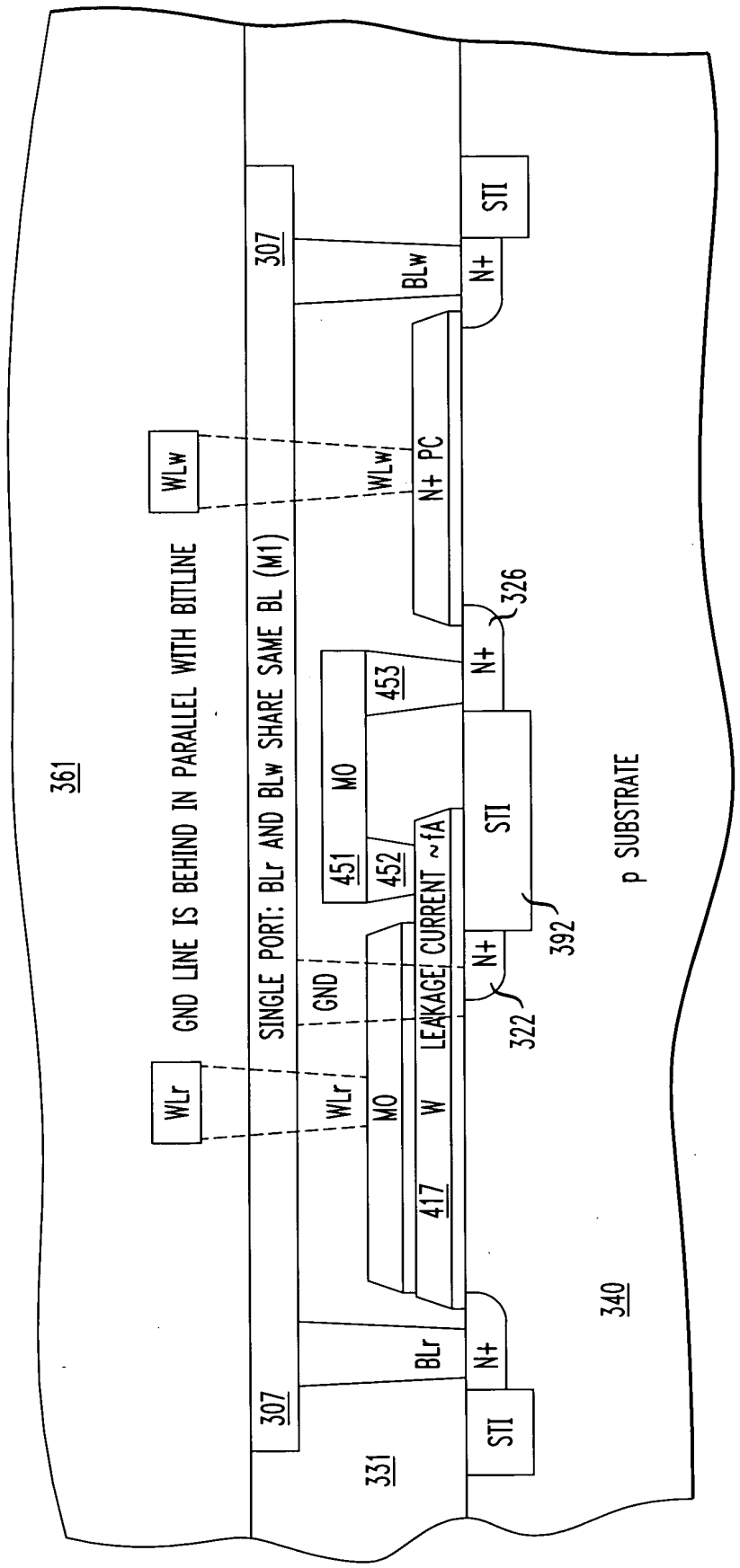

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FIG. 5A

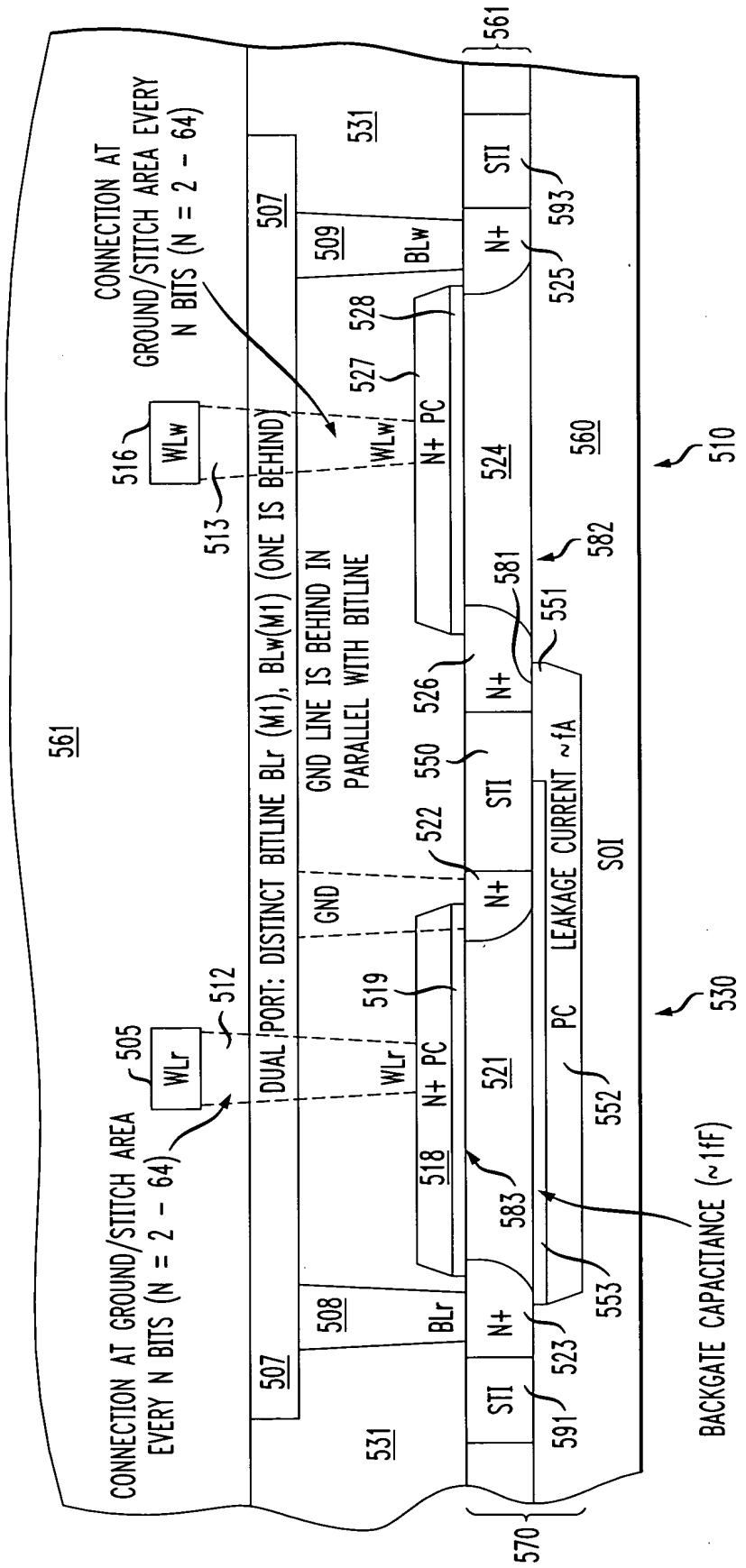

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FIG. 5B

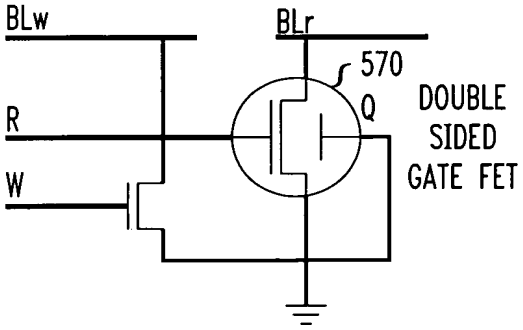

FIG. 5C

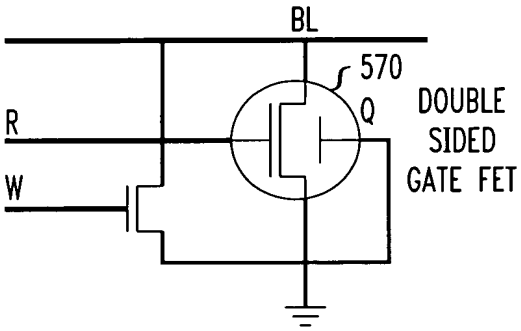

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FIG. 6

DOUBLE GATE	VBLH	VWLw	VTw	VWLr	VTr	Vsrc	Vcell STORE, READ	VBL	Vg_leak_read Vcellmax - (Vsrc + Vt)
p+, n+	0.8	-0.5 ~0.8	0.5	-0.8 ~0 ~0.8	1.2	0	0 ~0.8, 0.6 ~1.4	0 ~0.8	0.8 - (0+1.2) = -0.4
w, n+	0.5	-0.5 ~0.8	0.5	-0.5 ~0 ~0.8	0.8	0	0 ~0.7, 0.6 ~1.3	0 ~0.5	0.7 - (0+0.8) = -0.1
w, n+	0.5	-0.5 ~1.0	0.5	0 ~1.0	0.8	0	0 ~0.4, 0.7 ~1.1	0 ~0.5	0.4 - (0+0.8) = -0.4
p+, n+	0.5	-0.5 ~1.0	0.5	0 ~1.0	1.2	-0.5	0 ~0.4, 0.7 ~1.1	-0.x ~0.5	0.4 - (-0.5+1.2) = -0.3
p+, n+	1.0	0 ~1.5	0.5	0 ~1.0	1.2	0	0.5 ~0.9, 1.2 ~1.6	0.x ~1.0	0.9 - (0+1.2) = -0.3
p+, n+	0.4	0 ~1.0	0.5	0 ~1.0	0.6	0	0 ~0.4, 0.7 ~1.1	0 ~0.4	0.4 - (0+0.6) = -0.2

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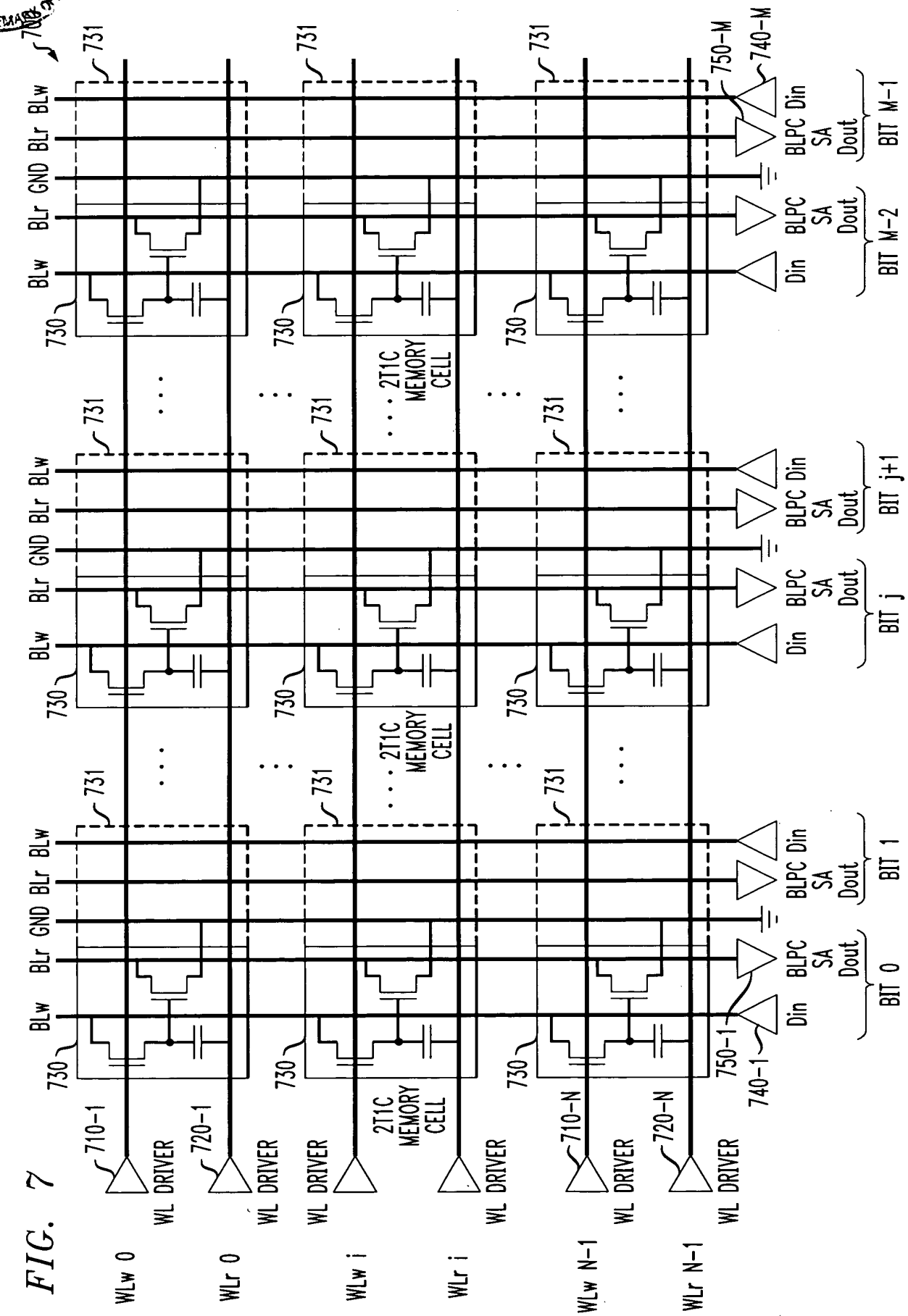

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FIG. 8

	TRADITIONAL 1T1C CELL	NDR 2T1C CELL	NDR 2T1C CELL (WITH WRITE BOOST)
BLWrite	VBLH	VBLH	VBLH
Vcell_i(0,1)	0, VBLH	0, VBLH	0, VBLH + VB
Vcell_f(0,1)	0, VBLH Tr (<VBLH) Tr = Ccell/(Ccell+Cbl)	bVread, VBLH + bVread b = Ccell/(Ccell+Crg)	bVread, VBLH + VB + bVread b = Ccell/(Ccell+Crg)
GAIN = (Vcell_f(0,1)/Vcell_i(0,1))	Ccell/(Ccell + Cbl) <<1, TYPICALLY 0.2	1	1 GAIN (OVER VBLH) = 1 + VB/VBLH ~2

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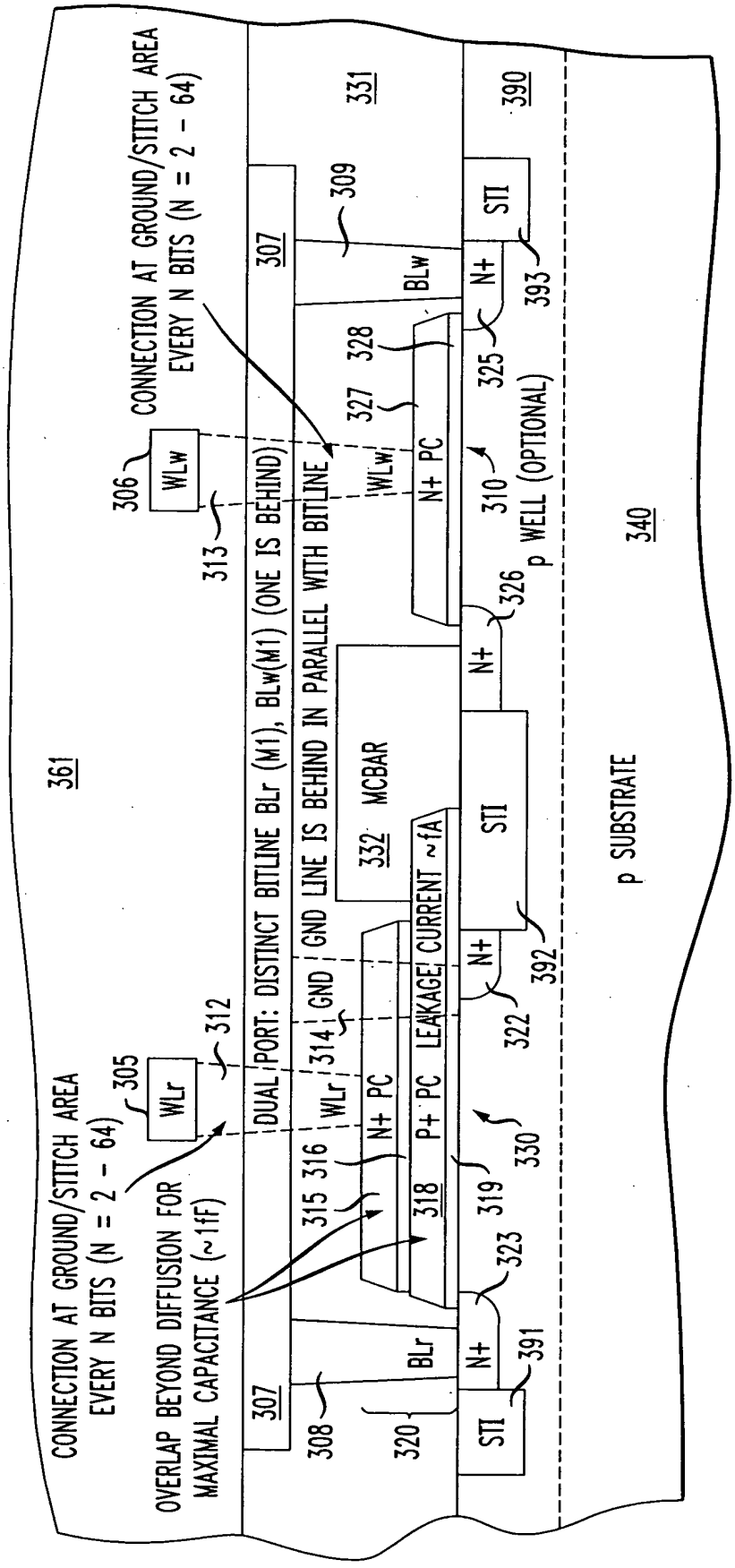
FIG. 3A